Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Original) A polypeptide variant with increased heparin-binding ability, characterized in that

(i) added to the amino acid sequence of a polypeptide is at least one oligopeptide comprising the amino acid sequence $X_1X_2X_3X_4X_5X_6$; and/or

(ii) inserted into the amino acid sequence of a polypeptide is at least one oligopeptide comprising the amino acid sequence $X_1X_2X_3X_4X_5X_6$; and/or

(iii) at least one oligopeptide sequence naturally occurring within the amino acid sequence of a polypeptide is substituted by an oligopeptide comprising an amino acid sequence $X_1X_2X_3X_4X_5X_6$,

wherein

X_1 = K, R, or H;

X_2 = K, R, or H;

X_3 = K, R, H, or no amino acid;

X_4 = not K, R, H, but any other amino acid;

X_5 = not K, R, H, but any other or no amino acid;

X_6 = not K, R, H, but any other or no amino acid (SEQ ID NO: 1),

or

X_1 = K, R, or H;

X_2 = not K, R, H, but any other amino acid;

X_3 = K, R, or H;

X_4 = not K, R, H, but any other amino acid;

X_5 = not K, R, H, but any other or no amino acid;

X_6 = not K, R, H, but any other or no amino acid (SEQ ID NO: 2); and

the polypeptide is selected from among members of the DVR family including the TGF-β superfamily.

2. (Original) A polypeptide variant as recited in claim 1, characterized in that one to four copies of said oligopeptide are inserted at one to four positions within the polypeptide.

3. (Previously presented) A polypeptide variant as recited in claim 1, characterized in said oligopeptide comprises amino acid sequence RKRA (SEQ ID NO:3) or RKRAKHKQ (SEQ ID NO:4).

4. (Previously presented) A polypeptide variant as recited in claim 1, characterized in said oligopeptide is added to the N-terminus and/or inserted into the N-terminal region, and/or substitutes a part of the N-terminal region.

5. (Previously presented) A polypeptide variant as recited in claim 1, characterized in that the amino acid sequence of said polypeptide variant further contains a sequence of relevance to recombinant expression at the N-terminus, said sequence of relevance to recombinant expression being M or MZ, where M stands for methionine and Z stands for one or more amino acids.

6. (Previously presented) A polypeptide variant as recited in claim 1, characterized in that said polypeptide variant further contains a His-tag.

7. (Currently amended) A polypeptide variant as recited in claim 1, characterized in that said polypeptide is altered by addition, substitution, insertion, inversion, and/or deletion, where said polypeptide altered by ~~addition~~ addition, substitution, insertion, inversion and/or deletion shows at least 10% of the biological activity of the unaltered polypeptide, ~~and/or~~ and at least ~~50%~~ 90% homology to the unaltered polypeptide.

8. (Previously presented) A polypeptide variant as recited in claim 1, characterized in that said polypeptide is BMP-2, BMP-4, BMP-5, BMP-6, BMP-7/OP-l, or BMP-8/OP-2.

9. (Currently amended) A polypeptide variant as recited in claim 1, wherein the polypeptide has a cysteine knot, characterized in that said oligopeptide is inserted before the cysteine knot.

10. (Previously presented) A polypeptide variant as recited in claim 8, characterized in that said polypeptide variant has the amino acid sequence SEQ ID NO:5 (T3) or SEQ ID NO:6 (T4).

11. (Currently amended) A polypeptide variant as recited in claim 1, characterized in that said polypeptide variant is a polymer, oligomer, or dimer ~~of said polypeptide variant as recited in~~ ***~~any one of claims 1 to 10~~***.

12. (Previously presented) A nucleic acid molecule, comprising a nucleic acid sequence encoding a polypeptide variant as recited in claim 1.

13. (Original) A nucleic acid molecule as recited in claim 12, characterized in that said nucleic acid sequence is derived from genomic DNA or cDNA, or is a synthetic DNA.

14. (Previously presented) A nucleic acid molecule as recited in claim 12, further comprising a promoter suited to control expression, wherein said nucleic acid sequence encoding a polypeptide variant is under the control of said promoter.

15. (Previously presented) A nucleic acid molecule as recited in claim 12, wherein said nucleic acid molecule contains at least part of a vector.

16. (Currently amended) ~~Host~~ An isolated host cell, containing a nucleic acid molecule as recited in claim 12, wherein said host cell is a prokaryotic or eukaryotic cell suitable for expression of said nucleic acid molecule.

17. (Previously presented) A process for producing a polypeptide variant with increased heparin-binding ability as recited in claim 1, comprising:

addition to the amino acid sequence of a polypeptide of at least one oligopeptide containing an amino acid sequence selected from SEQ ID NO:1 or SEQ ID NO:2; and/or

insertion into the amino acid sequence of a polypeptide of at least one oligopeptide containing an amino acid sequence selected from SEQ ID NO:1 or SEQ ID NO:2; and/or

substitution of at least one oligopeptide sequence naturally occurring within the amino acid sequence of a polypeptide by one oligopeptide containing an amino acid sequence selected from SEQ ID NO:1 or SEQ ID NO:2.

18. (Original) A process as recited in claim 17, characterized in that said process comprises a chemical and/or enzymatic synthesis process.

19. (Currently amended) A process as recited in ~~claim~~ claim 17, characterized in that said process comprises gene technological processes.

20. (Currently amended) A process as recited in claim 17, characterized in that said process comprises:

a) in vitro mutagenesis of a nucleic acid encoding a polypeptide, so that

(i) to the nucleic acid encoding said polypeptide is added at least one nucleic acid encoding an oligopeptide containing an amino acid sequence that is selected from SEQ ID NO:1 or SEQ ID NO:2; and/or

(ii) into the nucleic acid encoding said polypeptide is inserted at least one nucleic acid encoding an oligopeptide containing an amino acid sequence that is selected from SEQ ID NO:1 or ~~REQ~~ SEQ ID NO:2; and/or

(iii) at least one nucleic acid sequence naturally occurring within the nucleic acid sequence encoding said polypeptide is substituted by a nucleic acid sequence encoding an oligopeptide containing an amino acid sequence selected from SEQ ID NO:1 or SEQ ID NO:2;

b) cloning of the mutated nucleic acid into a suitable expression vector;

c) transformation/transfection of a suitable host cell with the expression vector obtained;

d) cultivation of said transformed/transfected host cell under conditions suitable for expression;

e) isolation, and if necessary renaturation, of the expressed polypeptide variant.

21. (Currently amended) A process as recited in claim 17, characterized in that said process is carried out within a prokaryotic host cell ~~such as preferably E. coli~~.

22. (Currently amended) A process as recited in claim 17, characterized in that said process is carried out within a eukaryotic cell~~, preferably a yeast, plant or insect cell, CHO or COS cell~~.

23. (Currently amended) A pharmaceutical composition, comprising a polypeptide variant as recited in claim 1 ~~and, optionally, physiologically compatible additives~~.

24. (Currently amended) ~~Use of a~~ A method of stimulating osteogenesis or wound healing, or treating inflammation or cancer, in a human or animal, comprising administering the polypeptide variant as recited in claim 1 to ~~stimulate osteogenesis or wound healing, or to treat inflammation or cancer~~ a human or animal that is in need of bone formation or repair or is suffering from a wound, inflammation, or cancer.

25. (Previously presented) A composition for osteoinduction, comprising a polypeptide variant as recited in claim 1 and a carrier selected from among heparin, hydroxyapatite, hyaluronic acid, synthetic polymers, and collagen.

26. (Previously presented) An osteoinductive matrix, characterized in that said matrix contains or is coated with heparin or heparin-like substances and polypeptide variants as recited in claim 1 are adsorbed to said heparin or heparin-like substances.

27. (New) A process as recited in claim 21, wherein the prokaryotic host cell is *E. coli.*

28. (New) A process as recited in claim 22, wherein the eukaryotic cell is selected from the group consisting of a yeast cell, a plant cell, an insect cell, CHO cells, and COS cells.

29. (New) A pharmaceutical composition as recited in claim 23, further comprising physiologically compatible additives.